Huashan Sun

sunhuashan910@gmail.com ◇ (+86) 18780084109 ◇ Homepage ◇ Google Scholar ◇ GitHub

Education

Beijing Institute of Technology — Beijing, China

Master of Engineering Candidate, Artificial Intelligence — 09/2023 - 06/2026

Bachelor of Engineering, Artificial Intelligence — 09/2019 - 06/2023

Research Experience

SoLoPO: Unlocking Long-Context Capabilities in LLMs via Short-to-Long Preference Optimization — Under review

02/2025 - 05/2026

First Author, paper link, work conducted at Tongyi Lab

- Proposed SoLoPO framework, enhancing mainstream PO algorithms with better performance and improved efficiency.
- Theoretically proved long-context PO can be decoupled into short-context PO and short-to-long reward alignment.
- SoLoPO achieves superior results on various long-context benchmarks compared to original algorithms (DPO, SimPO, and ORPO), reducing DPO run time by 52% while doubling the max trainable sequence length.

Unveiling and Addressing Pseudo Forgetting in Large Language Models — **ACL 2025 Findings**

First Author, paper link, work conducted at Beijing Institute of Technology (BIT) — 10/2024 - 02/2025

- Identified and validated the pseudo forgetting phenomenon in LLMs, demonstrating that performance degradation on previously learned tasks stems from reduced instruction dependency rather than actual capability loss.
- Proposed Rationale-Guidance Difficulty based Replay framework for continual learning, achieving 1.8% reduction in forgetting rate and 2.4% improvement in average performance compared to Random-Replay.

PSST: A Benchmark for Evaluation-driven Text Public-Speaking Style Transfer — **EMNLP 2024 Findings**

First Author, paper link, work conducted at BIT — 10/2023 - 06/2024

- Proposed PSST benchmark for evaluating LLMs' complex style transfer capabilities in the long-context scenarios.
- Developed a fine-grained evaluation framework for long-text style transfer, incorporating document-level style strength score, style strength distribution, and QA-based semantic consistency assessment.
- Key findings of current LLMs: over-stylization, uneven style strength distribution, and severe semantic degradation.

MindLLM: Lightweight large language model pre-training, evaluation and domain application — **AI Open**

10/2023 - 06/2024

Co-first author, paper link, work conducted at BIT

- Pre-training: (1) participated in data mixture experiments; (2) implemented "effective" pre-training sample construction experiments and multi-GPU training for MindLLM-3B, achieving 2-point improvement in MMLU with ICL promoting.
- Instruction Tuning: conducted diversified high-quality instruction-following data construction and selection.
- Evaluation: developed multi-dimensional ability evaluation framework for benchmarking against mainstream LLMs.
- Achievements: MindLLM-1.3B and 3B outperform or match LLMs with more parameters and training data on general knowledge, bilingual alignment, and numerical computation benchmarks. (open-source link of MindLLM-1.3B)

Contributing author publications

[1] How far can in-context alignment go? exploring the state of in-context alignment (EMNLP 2024 Findings, link)

[2] Fundamental capabilities and applications of large language models: A survey (ACM Computing Surveys, link)

[3] EduBench: A Comprehensive Benchmarking Dataset for Evaluating LLMs in Diverse Educational Scenarios (link)

Internship Experience

Tongyi Lab, Alibaba Group — Beijing, China

Research Internship — 12/2024 - Present

- Currently focusing on sparse attention, and reinforcement learning of long-context LLMs and long memory agents.
- Proposed **SoLoPO**, a unified framework for better and efficient long-context alignment.

Rednote — Beijing, China

Recommendation Algorithm Intern — 10/2022 - 02/2023

- *Spark*-based data construction and model training of multi-dimensional attention recall system.
- Developed and tested code of data preprocessing & model training in RedAir project.

Techniques and Skills

- **Deep learning frameworks:** PyTorch, Transformers, DeepSpeed, veRL, vLLM, OpenCompass
- **Efficient training algorithms:** Ulysses, ZeRO, FSDP, Flash-Attention, LoRA